1. An acoustic transducer that converts a mechanical motion into acoustical energy comprising:

a thin sheet diaphragm that is curved in a plane transverse to a first direction,

a support that fixes one generally linear portion of said diaphragm along said first direction, and

at least one actuator operatively coupled to said diaphragm and generally aligned with, but mutually spaced from said fixed generally linear portion in a second direction transverse to said first direction by a distance that produces a curvature of said diaphragm and that accommodates a movement of said diaphragm that corresponds to the travel of said actuator, said diaphragm movement being amplified with respect to said actuator travel and generally transverse to the direction of said actuator travel.

2. The acoustic transducer of claim 1 wherein said at least one actuator is characterized by a high force and short linear travel.

3. The acoustic transducer of claim 1 wherein said at least one actuator is a piezo actuator.

4. The acoustic transducer of claim 1 wherein said curvature is generally parabolic.

5. The acoustic transducer of claim 2 further comprising a seal at at least a portion of the periphery of said diaphragm to assist in maintaining the acoustic pressure gradient across said transducer.

6. The acoustic transducer of claim 5 wherein said actuator is a piezo bimorph drive, and said operative coupling is generally at the center of said diaphragm to divide said diaphragm into two sections, and where said diaphragm curvature in one section is convex, and in the other section is concave.

7. An acoustic transducer according to any of claims 4 or 5 for use in combination with a video screen display wherein said support overlies the screen display and said diaphragm is generally coextensive with, and closely spaced from, said screen display.

8. The acoustic transducer of claim 7 wherein said actuator is a piezoelectric drive and said diaphragm is formed of aan optically clearfilm.

9. The acoustic transducer of claim 7 wherein said diaphragm is fixed along its vertical centerline, and said actuator is a pair of actuators that are each operatively coupled to one lateral edge of said diaphragm to form two diaphragm sections each generally coincident with about half of the screen display.

10. The acoustic transducer of claim 8 wherein said piezoelectric drive is a single layer piezo actuator.

11. The acoustic transducer of any of the preceding claims further comprising an electronic drive circuit operatively connected to said power actuators.

12. The acoustic transducer of claim 11 wherein said drive circuit comprises an active filter and an amplifier.

13. The acoustic transducer of claim 12 wherein said drive circuit further comprises a step-up transformer and a resistor connected in series with said transformer to control high frequency response.

14. The acoustic transducer of claim 12 wherein said drive circuit drives said actuator to control operation at a main resonance in the transducer output.

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